



NIRMALA

PHARMASCENES

SCIENCE FOR FUTURE



NEWS LETTER

Issue 1 April 2016

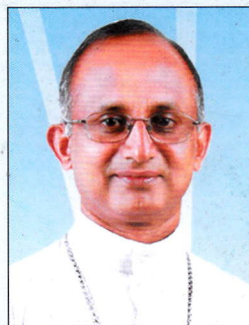
NIRMALA COLLEGE OF PHARMACY
NIRMALA HILLS, MUVATTUPUZHA
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ADMINISTRATOR'S MESSAGE

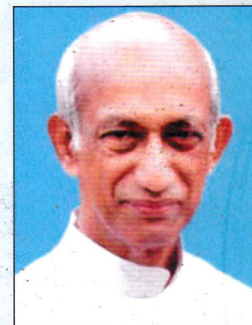


Rev. Fr. Jos Mathai Mailadiath

Nirmala College of Pharmacy is yet another hallmark of the commitment and experience of the Catholic Diocese of Kothamangalam in the field of education. The College provides excellent infrastructural facilities with all modern amenities, a dedicated and experienced faculty with a vision to develop the institution into a full-fledged pharma-research centre. The efforts taken by the college towards the achievement is not only in academic performance and extracurricular activities but also in inculcating the values of



Rt. Rev. Dr. George Madathikandathil
Bishop of Kothamangalam Diocese



Rt. Rev. Msgr. George Oliapuram
President

morality in the minds of students are really commendable. This will go a long way in realizing the motto of college; "To serve God and Mankind."

It is a matter of great joy that Nirmala College of Pharmacy is bringing out the Newsletter 'Nirmala Pharmascenes' to bring out the institutional activities and scientific knowledge of the faculty. I congratulate all those involved in this venture. I take this opportunity to congratulate the Principal, Faculty and Students for their efforts in making this academic year an eventful one.

PRINCIPAL'S MESSAGE



Dr. P. Perumal

M. Pharm., Ph. D., FIC

Nirmala College of Pharmacy has reached its 12th year of academic voyage. Pharmacy education is offering tremendous opportunities in India and abroad and it is one of the most demanding professions in Middle East, Australia and USA. The students can gain their jobs in different sectors like community pharmacy, pharmaceutical industries, biotechnological industries, clinical research, bioinformatics etc.

Nirmala College of Pharmacy was started in the year 2004 under Nirmala College Society by the Diocese of Kothamangalam. The college was started with a vision to transform it into a Pioneer Research Centre in the field of Pharmaceutical education and to train our students on

conformity with the demands of the profession. The college mission is the formation of students with academic excellence coupled with integrity of character, based on ethical values of truth and righteousness.

Eight batches of students have completed their B.Pharm course curriculum and three batches of students have completed their M.Pharm course. Last two years we were awarded with University ranks in M.Pharm. Our students are equally good in National Level Entrance Examinations like Graduate Pharmacy Aptitude Test (GPAT). In GPAT-2015, 6 were awarded with valid score card, in which one of our students bagged 30th rank in All India Level. In GPAT-2016, 4 were awarded with valid score card. Pharm D course was started in the year 2014. Last year the college witnessed 'Decennial Celebrations' and 'Dedication of New Block' with about 50000 sq.ft building, 'Continuing Pharmacy Education Program' in association with Kerala State Pharmacy Council etc.

I wish to appreciate all those who have toiled hard in this venture of Newsletter. Let me also take this opportunity to thank our Patron, President, Secretary and Administrator for their inspiration and guidance.

INAUGURATION OF THE NEW BLOCK

“DECENNIAL CELEBRATIONS”



Blessing of the 'New Block' by Rt. Rev. Dr. George Madathikandathil.

Rt. Rev. Dr. George Madathikandathil, Bishop of Diocese of Kothamangalam blessed the New Block on 22-05-15. His Excellency also inaugurated the New Block by unveiling the plaque.

Sri P.J. Joseph, Honourable Minister for Water Resources inaugurated the Decennial Celebrations and Annual Day by lighting the lamp. Our Administrator Rev. Fr. Jos Mathai Mailadiath welcomed the gathering. Our Principal, Dr. P. Perumal presented a report on "Path of Nirmala College of Pharmacy: Milestones".



Sri. P.J. Joseph Inaugurating the 'Decennial Celebrations'



His Excellency Rt. Rev. Dr. George Madathikandathil, Bishop of Diocese of Kothamangalam inaugurating the New Block by unveiling the plaque.



An Invocation performed by our students during the Decennial Celebrations



GRADUATION CEREMONY (2010-2014 BATCH)



Graduation Ceremony-2015 being inaugurated by Dr.M.K.C. Nair, Honourable Vice Chancellor, Kerala University of Health Sciences, Thrissur.

The graduation ceremony of first batch (2010-2014) of B.pharm students under KUHS University was conducted ceremoniously. Honourable Vice Chancellor of Kerala University of Health Sciences, Dr. M.K.C. Nair inaugurated the function and addressed the students and gave valuable information for building up their career. Honourable Vice Chancellor distributed the certificates. Rev. Msgr. George Oliapuram presided over the function.

SEMINARS CONDUCTED IN THE COLLEGE



A “ Continuing Pharmacy Education Program” was conducted in our college on 22nd November 2014. Sri. B. Rajan, President, Kerala State Pharmacy Council inaugurated the function. Prof. Immanuel James, Amritha College of Pharmacy, Cochin, Mr. V.N. Raveendran, Retd. Asst. Drugs Controller, Prof. A.J. Chacko, Dept. Of Pharmaceutical Sciences, Mahatma Gandhi University, Kottayam and Prof. John Joseph, Nirmala College of Pharmacy took classes on “Drugs Used in Hypertension”, “Drug Regulatory Affairs”, “Safe Use of Antibiotics” and “Patient Counselling” respectively.



A One day National Seminar on “Perspectives of Pharmacy Profession-Module I-Community Pharmacy and Trade” was conducted in our college on 1-10-15 as a part of “World Pharmacist Day”. Prof. Dr. L. Panayappan, St. James College of Pharmacy, Chalakudy and Mr. Manohar Kodakkat gave seminars on topics related to Role of Pharmacist in Community Pharmacy.

II Pharm D students organised an Antibiotic Awareness program by making posters related to “Safer Use of Antibiotics” on 24-11-15. Ms. Lancy Morries and Ms. Sandramol Shaji of II Pharm D presented a seminar on “Responsible Use of Antibiotics”.

World Pharmacist Day Celebrations & One Day National Seminar

World Cancer Day was observed on 14-02-15. Presentations were done by M.Pharm, IV B.Pharm and Pharm D students.

World Stroke Day was observed on 29-10-15 and a poster presentation competition was conducted for IV B.Pharm students.



Poster Presentation Competition by students as part of World Stroke Day.

SEMINARS ATTENDED BY STUDENTS



Our Principal and students along with Dr. B.Suresh, President, Pharmacy Council of India and Sri B.Rajan, President, Kerala State Pharmacy Council during 8th National Pharmaceutical Scientific Fair held at Kerala State Pharmacy Council, Thiruvananthapuram.

▶▶ Pharm D students along with our Principal attended 8th National Pharmaceutical Scientific Fair held at Kerala State Pharmacy Council, Thiruvananthapuram.

▶▶ Third Year B.Pharm students attended a two day “International seminar on Nanomedicine and Cancer Research” organised by Al Shifa Pharmacy College, Perinthalmanna.

▶▶ M.Pharm and IV B.Pharm students attended IPC-2015 held at Hitex, Hyderabad along with their Industrial visit at Chennai.

▶▶ M.Pharm and IV B.Pharm students attended 67th IPC held at JSS College of Pharmacy, Mysore along with their Industrial Visit at Micro Labs, Bangalore.

▶▶ Ms. Anu Siby and Ms. Ashmi Jose of IV B.Pharm attended a seminar on “Health Problems of Adolescent Girls” in connection with the “International Girls Day” conducted at KUHS, Thrissur.

NIRMALA IN NEWS

Centre for ISPOR in KUHS, Thrissur

Our College is the centre for ISPOR (Society of Pharmacoeconomics and Outcomes Research India) Student Chapter in Kerala University of Health Sciences, Thrissur. Our Pharm D students Mr. Aby Paul and Mr. Edwin Antony were selected as President and Secretary respectively.

The mission of ISPOR is to provide an environment for knowledge sharing among researchers, healthcare practitioners and decision-makers interested in pharmacoeconomics and outcomes research. It act as a resource at a local level for individuals including students interested in

pharmacoeconomics and outcomes research. It provide an opportunity for India chapter members to become more familiar with the activities of ISPOR as well as participate in its activities.



Ms. Anchita Teresa George receiving the “Kalathilakom” title for State Level Arts Fest “Pharmakalolsavam-2014”

Extracurricular activities

In Pharmakalolsavam (30th January to 1st February 2014) conducted at the State Level among Pharmacy colleges, hosted by JDT Islam College of Pharmacy, Kozhikode, Ms. Anchita Teresa George of our college was declared “Kalathilakam”. Our college stood third in the overall point level. Ms. Anchita Teresa George stood first in Pencil drawing, Cartoon drawing and Painting.

Ms. Deepika John stood first in classical music and third in Mappilapattu.

Our students participated in KUHS Arts Fest (Middle Zone) conducted at Al Azhar Dental College, Thodupuzha and bagged the following prizes.

Mr. Jobin Xavier won first Prize for photography. Ms. Anchita Teresa George and Mr. Aby Paul bagged second Prize for debate. Ms. Anchita Teresa George got Second Prize for water colour. Mr. Edwin Antony secured third Prize for Mono Act. Mr. Joel Joby won second prize for Jass.

Ms. Anu Siby of IV B.Pharm secured second prize in State Level Elocution conducted by IPA and St. James College of pharmacy, Chalakudy.



Our students receiving the Second Runner Up Trophy for “Pharmakalolsavam-2014”

Our Basketball team stood Second Runner Up in KUHS C Zone Basketball competition held at Govt. T.D Medical College Alappuzha.



Second Runner Up in KUHS C Zone Basketball

PUBLICATIONS

Faculty Achievements



Mr. Sujith Abraham, Associate Professor has been awarded PhD in Pharmaceutics from Karpagam University, Coimbatore.

Academic Achievements



Mr. Eby George receiving a memento from Sri Francis George, Ex-MP for securing Second Rank in M.Pharm examination(2011-2013), KUHS, Thrissur



Ms. Mini Alias being honoured with a memento by Sri. Francis Goerge, Ex-MP for securing First Rank in M.Pharm examination(2012-2014), KUHS, Thrissur.

● Minu B. Pattasseril. Determination of Antioxidant Activity of the Selected Extracts of *Mathuka neriifolia* (Moon) H.J Lam, Isolation and Characterization of Phytoconstituents of the Ethanol Extract by Column Chromatography. World Journal of Pharmaceutical Sciences: Vol3 (4). P. 716-728. April 2015.

● Manu Jose. Diabetic Ketoacidosis – A Review and Update. International Journal of Pharmacy and Analytical Research (IJPAR). Vol4 / Issue 3 / July-Sep-2015. P. 327-333.

● Manu Jose. Ebola Virus Disease – A Comprehensive Review. International Journal of Research in Pharmacology & Pharmacotherapeutics (IJRPP) Vol 3 / Issue 4 / Oct-Dec 2014. P. 293-300.

● Thirupathy Kumaresan, Dr. P. Perumal. Wound Healing Activity of *Prosopis juliflora* Linn. World Journal of Pharmaceutical Research. 2015, Vol 4, Issue 9, P. 1502-1509.

● Sujith Abraham. Microbiological Assay and In vivo Simulatory Study of Biopolymer Derived Hybrid Cefachlor Microcapsules. International Journal of Universal Pharmacy and Biosciences :Vol3 (4): July August 2015.

● Sujith Abraham. Microbiological Assay and In vitro Characterization of Cefachlor Microcapsules. International Journal of Institutional Pharmacy and Lifesciences: Vol 12 (14): Jan 2015.

● Manju Maria Mathew. Effect of Super Disintegrants on the Release of Satranidazole from Fast Dissolving Tablets. Research Journal of Pharmaceutical, Biological and Chemical Sciences, 2015; 6 (2): 1881-1886.

● Flowerlet Mathew. Natural Polymers in Pharmaceutical Formulation. International Journal of Institutional Pharmacy and Life sciences: Vol5 (1): Jan-Feb 2015.

● Jayakumar K.S., Dr. P. Perumal. A Retrospective Study to Determine the Prevalence of Left Ventricular Systolic Dysfunction. Journal of Pharma Innovative Research. 2015, Volume 2. Issue1, P. 20-23.

● Dr. P. Perumal. In Vitro Cytotoxic Activity of Ethanolic Extract of *Triumfetta rhomboidea* Against Different Cancer Cell Lines. International Journal of Research in Pharmacology and Pharmacotherapeutics. Vol4. Issue 1, Jan-Mar 2015, P. 2278-2648.

Poster Presentations by Faculty

- Ms. Manju Maria Mathew presented a paper entitled 'Design and Development of Orodispersible Tablets of Satranidazole' in the Scientific Poster Session of 66th Indian Pharmaceutical Congress held at Hitex, Hyderabad from 23rd to 25th, January 2015.
- Mr. Eby George presented a poster entitled "GENE THERAPY : A Vital Tool in the Treatment of Parkinson's Disease" at Al shifa college of pharmacy, Perinthalmanna during "International Conference on Nanomedicine and Cancer Research" on 20th and 21st November 2015.

Seminars and Conferences Attended by Faculty

Sl No.	Faculty	Seminar / Modules	Date & Venue
1	Mr. Shaji George	"Pharmaceutical Industrial Insight"	28 th April 2015 Al-Shifa College of Pharmacy Perinthalmanna
2		"Workshop for Resource Persons for Continuing Pharmacy Education (CPE)"	18 th March 2015 Kerala State Pharmacy Council Thiruvananthapuram
3		"Advancing Pharmacy Practice, Education and Research Impact on Health Care and Alzheimer's – A Clinical Out Look"	12 th January 2015 Mahatma Gandhi University Puthuppally Campus
4		"Pharmacy Practice Module – Advanced Learning Series – VIII Gastro Intestinal and Liver Disorders"	5 th to 7 th Nov 2014 Al-Shifa College of Pharmacy Perinthalmanna
5		"Pharmacy Practice Module – Advanced Learning Series – VII Oncology"	9 th to 11 th August 2014 Vels University Chennai
6	Mr. Jayakumar K. S.	"Advancing Pharmacy Practice, Education and Research Impact on Health Care and Alzheimer's – A Clinical Out Look"	12 th January 2015, Mahatma Gandhi University, Puthuppally Campus
7		"Pharmacy Practice Module – Advanced Learning Series – VIII Gastro Intestinal and Liver Disorders"	5 th to 7 th Nov 2014, Al-Shifa College of Pharmacy Perinthalmanna
8	Mr. Mathews Abraham	"Advanced Experimental Techniques and Data Acquisition in Pharmacological Research"	5 th October 2015, JSS College of Pharmacy , Ooty
9	Dr. Sujith Abraham Mr. Fels Saju, Mr. Eby George & Ms. Rakhimol K.S.	"International Conference on Nanomedicine and Cancer Research"	Al-Shifa College of Pharmacy, Perinthalmanna on 20 th & 21 st Nov. 2015
10	Lins Mary Joy, Shaji George & Jayakumar K.S.	"Continuing Pharmacy Education- National Seminar"	National College of Pharmacy, Calicut on 9 th , 10 th & 11 th Dec. 2015
11	Dr. S. Kuppaswamy Dr. Sujith Abraham, Deepa Jose Fels Saju & Swathylakshmi N.	"67th Indian Pharmaceutical Congress"	JSS College of Pharmacy Mysore on 18 th & 19 th Dec. 2015
12	Prof. John Joseph, Jayakumar K.S. & Shaji George.	"International Seminar on Innovative Research & Skills for Better Clinical Care"	St. Joseph's College of Pharmacy, Cherthala on 14 th & 15 th Jan. 2016
13	Naveen K.R.	"Cancer Oncowane"	Pushpagiri College of Pharmacy, Thiruvalla on 23 rd Feb. 2016

FREE RADICALS AND ITS PREVENTION - A REVIEW

Dr. P. Perumal

Principal & Head of the Department, Pharmaceutical Chemistry

Oxygen is a vital for life. When cells generate energy with use of oxygen, free radicals are created as a consequence of ATP (adenosine triphosphate) production by the mitochondria. These byproducts are generally Reactive Oxygen Species (ROS) as well as Reactive Nitrogen Species (RNS) that result from the cellular reduction-oxidation process. These species play a dual role as both toxic and beneficial compounds. At high concentrations, they generate oxidative stress, a deleterious process that can damage all cell structures as well as the aging process and some acute pathology (trauma, stroke). This may reveal some advantages and inconveniences of the antioxidant supplementation in health maintenance.

Characteristics of free radicals and oxidants

A molecule with one or more unpaired electron in its outer shell is called a free radical. Free radicals (OH , O_2 , NO , NO_2 , ROO and LOO) are formed from molecules via the breakage of a chemical bond such that each fragment keeps one electron, by cleavage of a radical to give another radical and, also via redox reactions. Biological free radicals are thus highly unstable molecules that have electrons available to react with various organic substrates such as proteins, lipids, lipoproteins, and Deoxyribonucleic acid (DNA).

Beneficial activities of free radicals and oxidants

In general, ROS/RNS at low or moderate levels are vital role in human health. At low or moderate concentrations, ROS and RNS are necessary for the maturation process of cellular structures and can act as weapons for the host defense system. E.g. Phagocytes (neutrophils, macrophages, monocytes) release free radicals to destroy invading pathogenic microbes as part of the body's defense mechanism against disease.

Various diseases caused by free radicals are Cancer and oxidative stress cardiovascular diseases (atherosclerosis, ischemia, hypertension, cardiomyopathy, cardiac hypertrophy and congestive

heart failure), neurological diseases (alzheimer's disease, parkinson's disease, multiple sclerosis, amyotrophic lateral sclerosis (ALS), memory loss, and depression), pulmonary disease, rheumatoid arthritis, nephropathy macular degeneration and cataracts.

Antioxidant classification

Endogenous compounds in cells can be classified as enzymatic antioxidants and non-enzymatic antioxidants.

The major antioxidant enzymes directly involved in the neutralization of ROS and RNS are: superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx) and glutathione reductase (GRx).

The non-enzymatic antioxidants are also divided into metabolic antioxidants and nutrient antioxidants. Metabolic antioxidants belonging to endogenous antioxidants are produced by metabolism in the body, such as lipoid acid, glutathione, L-arginine, coenzyme Q, melatonin, uric acid, bilirubin, metal-chelating proteins, transferrin, etc. While nutrient antioxidants belonging to exogenous antioxidants, are compounds which cannot be produced in the body and must be provided through foods or supplements, such as vitamin E, vitamin C, carotenoids, trace metals (selenium, manganese, zinc), flavonoids, omega-3 and omega-6 fatty acids, etc.

The following is a list of different kinds of antioxidants and foods that are high in each.

- **Allium sulphur compounds:** Leeks, onions, garlic
- **Anthocyanins:** Eggplant, grapes, berries
- **Beta carotene:** Pumpkin, mangoes, apricots, carrots, spinach, parsley
- **Catechins:** Red wine, tea
- **Copper:** Seafood, lean meat, milk, nuts, legumes
- **Cryptoxanthins:** Red peppers, pumpkin, mangoes
- **Flavonoids:** Tea, green tea, red wine, citrus fruits, onion, apples
- **Indoles:** Cruciferous vegetables such as broccoli, cabbage, cauliflower
- **Lignans:** Sesame seeds, bran, whole grains, vegetables
- **Lutein:** Corn, leafy greens (such as spinach)
- **Lycopene:** Tomatoes, pink grapefruit, watermelon
- **Manganese:** Seafood, lean meat, milk, nuts
- **Polyphenols:** Thyme, oregano
- **Selenium:** Seafood, offal, lean meat, whole grains
- **Vitamin C:** Oranges, berries, kiwi fruit, mangoes,

broccoli, spinach, peppers

- **Vitamin E:** Vegetable oils, nuts, avocados, seeds, whole grains
- **Zinc:** Seafood, lean meat, milk, nuts
- **Zoochemicals:** Red meat, offal, fish

Conclusion

The implication of oxidative stress in the etiology of several chronic and degenerative diseases suggests that

antioxidant therapy represents a promising avenue for treatment. In the future, a therapeutic strategy to increase the antioxidant capacity of cells may be used to fortify the long term effective treatment. However, many questions about antioxidant supplements in disease prevention remain unsolved. In the meantime, it is reminded that avoiding oxidant sources (cigarette, alcohol, bad food, stress, etc) must be considered as important as taking diet rich in antioxidants. Indeed, our health also depends on our lifestyle choice.

A Seminar on Drug Discovery and Development-Preclinical Oncology

On 7/01/16 a Seminar was organised for Final Year B.Pharm and First and Second Year M. Pharm students on the topic-“Drug Discovery and Development-Preclinical Oncology”. The resource person was Mr. Albi Francis, Research Associate, Novel Drug Discovery Development, Lupin Ltd., Pune. He is our B.Pharm Alumni and Second Rank holder for Mahatma Gandhi University in 2006-2010 batch.



Seminar by Mr. Albi Francis (Our Alumni), Research Associate, Lupin Ltd.

Indian Pharmaceutical Congress & Industrial Visit

Final Year B.Pharm students & Faculty during 67 th IPC & Industrial Visit.



ANTIBIOTIC RESISTANCE - A PREVIEW



Mr. Shaji George

Assistant Professor,
Department of Pharmacy Practice

A substance which was known as “Wonder drug” till 1942, later Selman Waksman coined the name Antibiotic, it was the single most important therapeutic discovery in the history of medicine. In the year 1928, Sir Alexander Fleming discovered Penicillin, a potent antibiotic and its potency was established by Florey and his team in year 1941 leading them to Nobel Prize.

The wonder drug now is attaining resistance and thus the topic antibiotic resistance has attained top priority in developed country as well as in developing country, due to rapid spread of organisms from one part of the world to another. Thus WHO and the Pharmacy Council of India together planned to conduct “Awareness Programme on Antibiotic Resistance”, in order to educate the common public, with the importance of antibiotic and its safe use.

The increasing availability of life-saving antibiotics in the developing world and lack of antibiotic regulation has become a concern around the globe. The overuse of these drugs is creating resistant strains of deadly bacteria. Thus even after all the advances in therapeutics and the availability of a large number of antibiotics, a person can die due to infection with resistant bacteria.

There are many factors that could contribute for the increase in antibiotics resistance in developing countries, like combination of a heavy disease burden, huge populations, and rapid spread through crowding, poor sanitation and inappropriate use of the available drugs. This is further complicated by the availability of antibiotics in open markets without proper prescriptions in majority of these countries. Many a time, the amount of antibiotics given is inadequate to treat serious infections due to poverty or lack of education and India comes under this situation.

As per a report published by scientists from Princeton University, which states that India's antibiotic consumption has gone up by 62%, the use went up from eight billion units in 2001 to 12.9 billion units in 2010 putting India as the world's largest consumer of antibiotics. Thus the chances of developing resistance also will go up many folds, hence indicating the need for awareness of antibiotic resistance.

The mechanism of resistance to antimicrobial agents can be due to non-permeability of the drug, alteration in target molecules, enzymatic drug modifications, and lactamase family of enzymes, resulting in a microbiologically ineffective compound.

The microorganism may attain resistance due to chromosomal mutations or genetic transfer or due to both. The resistance thus attained are called as transferable resistance, it possesses a great threat as it can spread rapidly or the genetic change will be carried forward. This transferable resistance is carried on the R plasmids. A single plasmid can carry a number of genes coding leading to multiple drug resistance, finally causing ineffectiveness to the particular class of antibiotic drugs.

The resistant microorganism is becoming a major concern due to the use of antibiotic itself, which is responsible for rise in resistant strain in the pathogenic bacteria. Such development may be due to the following contributing factors.

- **Lack of education:** The combination of poverty and ignorance leads to resistance development as people take antibiotic without prescription or due to inability to purchase adequate quantity of antibiotics or to pay a physician's fees due to poverty.
- **Nosocomial infections:** It is an infection acquired in hospital by a patient who was admitted for some other reason at the time of admission. Factors promoting infection in hospitals are; decreased immunity among patients, the increasing variety of medical procedures and invasive techniques creating potential route of infection; and the transmission of multi drug resistant bacteria from the crowded hospital populations, where poor infection control practices are followed. The virulence of the microorganism, susceptibility of the patient, environmental settings and the resistance of the organism are the important factors influencing the development of infection. The most commonly observed nosocomial infections are urinary tract infection followed by surgical site infection and nosocomial pneumonia.
- **Use of antibiotics in agriculture or aquaculture:** Antibiotics are used widely in agriculture and aquaculture for therapeutic, prophylactic and growth promoting purposes. During the process some

antibiotic remains in the flesh of the animals which in turn leads to human exposure. Top of that the presence of low levels of antibiotics may escalate resistant bacteria in the intestines of animals intended for human consumption. Also some time animals get contaminated with faecal bacteria during the slaughter process leading to contaminated meat reaching the consumer. Also there are reports of antibiotics resistant bacteria on fruits and vegetables which may be cultivated and collected near sewage or a sewage mixed soil it's also known that some cultivators use antibiotics directly on fruit and vegetable crops.

● **Environmental factors:** A study in different parts of the world revealed the alarming situation of presence of antibiotic resistant bacteria in fresh water. These organisms in nature would have resulted contamination of soil by antibiotics used in animals, plants or from the waste products of treated animals or humans. These organisms may get transferred into rivers and other fresh water sources through waste disposal system or by drainage or rain water from farm land.

● **Use in household products:** The use of antimicrobial agents to clean the house in one or the other way is similar to that of antibiotics, which indirectly tends to rise resistant strains of microorganism.

In the year 2009 about 65% of Indians did not have reliable access to essential medicines, compared to 30% of people worldwide, but the situation has

drastically changed by the year 2010, where the Indians are able to access antibiotics which might be both appropriate and inappropriate, the health expenditure and poverty, poor sanitation (including waste disposal) condition in hospitals are also a major concern in India leading to increased drug resistant infections.

Another major challenge is the absence of a good monitoring or surveillance system for prescription and dispensing practice involving antibiotics in India, where many pharmacies are not owned or run by qualified pharmacists. Thus the problem of malpractice takes place in drug dispensing, for financial gains, leading to supply of antibiotics along with other drugs without prescription.

As per a NEWS report published on 3rd December, 2014; the Haryana state, have started giving injected antibiotics to almost every baby born in hospitals. A deadly epidemic with bacterial infections that are resistant to most known antibiotics, is quietly sweeping India, and the main victims are new-borns with more than 58,000 deaths reported in 2013.

Thus it becomes important for us to appropriately use antibiotics with keeping in mind the safety and efficacy of antibiotic; if we are still taking it comfortably a day will come when the super bug will take over and the entire human population will be wiped out.

Congratulations GPAT QUALIFIERS 2016



Archana Premnath
Rank - 30 (GPAT - 2015)



Anchitha Teresa George
Rank - 143



Reshma Joseph
Rank - 158



Ann Maria Babu
Rank - 852



Grace Sebastian
Rank - 1489

Pharmaceutical Education in Professional Perspective

A two day National Seminar titled “Pharmaceutical Education in Professional Perspective” was organized in our college on 10th and 11th March 2016. Around 400 delegates including students, research scholars and faculty from various institutions attended the seminar.

The Vicar General and Manager, Kothamangalam Diocese Rev. Msgr. George Oliapuram presided over the function.

The Inaugural ceremony commenced with lighting of the lamp by the Patron Bishop Emeritus His Excellency George Punnakottil.

Dr. P.K. Sudhir, Controller of examinations, Kerala University of Health Sciences, delivered the Chief Guest address. He stressed on the importance of organizing workshops to uplift the profession to newer heights.

The scientific sessions were started by Mrs. Manju C.S., Assistant Professor, TD Medical College, Alappuzha on the topic “Professional Competence in Pharmacy Management”. Mr. J. Jayaseelan, Chairman of Indian Drug Manufacturers Association for Tamilnadu, Kerala & Pondicherry, led the afternoon session on the topic “Prospects and Expectations of Pharmaindustry”. 11th March, the second day of the seminar was started by Mr. Arun Menon, Manager, Project Leadership, Quintiles Research India Pvt.Ltd. Bangalore. “Clinical Research Career - A Focus on Core Competence” was the topic. Dr. S. Sriram, Professor and HOD, College of Pharmacy SRIPMS, Coimbatore, delivered a seminar on the topic “Imbibing Professionalism in Pharmaceutical Education”. The last session was handled by Mr. John Joseph, Chairman, SPACE HR Solutions and JCI certified trainer on the topic “Social Adaptation of Pharmacy Professionals”.

The Bishop of Kothamangalam Diocese, His Excellency George Madathikandathil delivered the valedictory address. His Excellency distributed the certificates to the delegates.



Inauguration of NILA 2016 by Bishop Emeritus Mar. George Punnakottil



Mr. J. Jayaseelan on “Prospects and Expectations of Pharmaindustry”



Dr. S. Sriram on “Imbibing Professionalism in Pharmaceutical Education”

National Pharmacy Week Celebrations

Nirmala College of Pharmacy has organised an awareness rally in Muvattupuzha town in order to explore the involvement of pharmacists in the responsible use of medicines. The students marched in the rally showing placards containing relevant information about "Safe Use of Drugs".



A view of Awareness Rally "Responsible use of medicines- Role of Pharmacist"

Editor's Note



Mr. Prasanth B, Asst. Professor

It's my great privilege to bring out "Nirmala Pharmascenes", the Newsletter of Nirmala College of Pharmacy. This year college has witnessed an array of academic as well as extra-curricular activities. The Newsletter encapsulated the Departmental activities and the achievements of the Faculty and the Students.

I express my deep sense of gratitude to Administrator Rev. Fr. Jos Mathai Mailadiath and Principal Dr. P. Perumal for their inspiration and guidance. My heartfelt thanks to all Faculty members for their constant support and encouragement.

Courses Offered

B.Pharm (Bachelor of Pharmacy-4 yrs)

M.Pharm in Pharmaceutics (2 yrs)

Pharm.D (Doctor of Pharmacy-6 yrs)

NIRMALA COLLEGE OF PHARMACY, MUVATTUPUZHA

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